

## ABSTRACT

A method and apparatus of improving prediction accuracy of a branch instruction scheme includes reading an individual instruction in a current set of instructions, fetching the individual instruction when an instruction fetch unit determines that the individual instruction is valid, and allowing the instruction fetch unit to use an index address for the  
5 fetched individual instruction. A method and apparatus of improving branch prediction accuracy includes receiving a set of instructions having an assigned address, making a prediction for a branch instruction in the set of instructions using the assigned address, and retaining the assigned address for the branch instruction in the set of instructions.

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